General Recommendations on Immunization

Montana Immunization Program

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General Recommendations on Immunization

Recommendations of the Advisory Committee on Immunization Practices (ACIP)

Continuing Education Examination available at http://www.cdc.gov/mmwr/cme/conted.html

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

General Recommendations on Immunization

- **An ACIP MMWR**
  - Timing and spacing
  - Contraindications and precautions
  - Preventing and managing adverse reactions to immunization
  - Vaccine administration
  - Storage and handling
  - Altered immunocompetence
  - Special situations
  - Vaccination records
  - Vaccination programs
  - Vaccine information sources

Overview

- **Timing and Spacing**
  - Antibody containing blood products
  - Different vaccines
  - Doses of the same vaccine
- **Contraindications and Precautions**
  - Adverse Events vs Adverse Reactions
  - Specific contraindications and precautions
    - Pregnancy
    - Altered Immunocompetence
      - HIV infection
      - Hematopoietic Cell Transplant
- **Preventing and Managing Adverse Reactions**
  - Risk benefit communication
  - Syncope

Timing and Spacing: Antibody-containing Blood Products

- Used to restore a needed component of blood
- Provide a passive immune response following disease exposure
- Concurrent administration of antibody containing blood product and vaccine?

Antibody and Live Vaccines

General Rule

- Inactivated vaccines are generally not affected by circulating antibody to the antigen
- Live, attenuated vaccines might be affected by circulating antibody to the antigen – an effectiveness concern

Antibody Products and Measles- and Varicella- containing Vaccines

Product given first	Action
Vaccine	Wait 2 weeks before giving antibody
Antibody	Wait at least 3 months before giving vaccine

Interval Between Antibody-containing Products and Measles- and Varicella-containing Vaccines

Appendix A

Recommended intervals between administration of **immune globulin preparations** and **measles-** or **varicella-containing vaccine**

Product / Indication	Dose, including mg immunoglobulin G (IgG)/kg body weight	Recommended interval before measles or varicella-containing[1] vaccine administration
Blood transfusion		
- Red blood cells (RBCs), washed	10 mL/kg (negligible IgG/kg) IV	None
- RBCs, adenine-saline added	10 mL/kg (10 mg IgG/kg) IV	3 months
- Packed RBCs (hematocrit 65%)[2]	10 mL/kg (60 mg IgG/kg) IV	6 months
- Whole blood (hematocrit 35%-50%)[2]	10 mL/kg (80-100 mg IgG/kg) IV	6 months
- Plasma/platelet products	10 mL/kg (160 mg IgG/kg) IV	7 months
Botulinum Immune Globulin Intravenous (Human)	1.5 mL/kg (75 mg IgG/kg) IV	6 months
Cytomegalovirus IGIV	150 mg/kg maximum	6 months
Hepatitis A IG		
- Contact prophylaxis	0.02 mL/kg (3.3 mg IgG/kg) IM	3 months
- International travel	0.06 mL/kg (10 mg IgG/kg) IM	3 months
Hepatitis B IG (HBIG)	0.06 mL/kg (10 mg IgG/kg) IM	3 months
IGIV		
- Replacement therapy for immune deficiencies[3]	300-400 mg/kg IV	8 months
- Immune thrombocytopenic purpura treatment	400 mg/kg IV	8 months
- Measles IG, contact prophylaxis (immunocompromised contact)	400 mg/kg IV	8 months
- Postexposure varicella prophylaxis	400 mg/kg IV	8 months
- Immune thrombocytopenic purpura treatment	1,000 mg/kg IV	10 months
Measles IG, contact prophylaxis - Standard (i.e., nonimmunocompromised) contact	0.5 mL/kg (80 mg IgG/kg) IM	6 months
Monoclonal antibody to respiratory syncytial virus F protein (Synagis™)[4]	15 mg/kg (IM)	None
Rabies IG (RIG)	20 IU/kg (22 mg IgG/kg) IM	4 months
Tetanus IG (TIG)	250 units (10 mg IgG/kg) IM	3 months
Varicella IG[5]	125 units/10 kg (60-200 mg IgG/kg) IM, maximum 625 units	5 months

Spacing of Antibody-containing Products and MMR and Varicella Vaccines

Product	Interval
Washed red blood cells	0 months
Hepatitis A (IG)	3 months
Measles prophylaxis (IG) (immunocompetent recipient)	6 months
Plasma/platelet products	7 months
Intravenous immune globulin (IGIV)	7-11 months

Products Containing Type-specific or Negligible Antibody

- **Palivizumab (Synagis)**
  - Contains only monoclonal RSV antibody
  - Does not interfere with live virus vaccination
- **Red blood cells (RBCs), washed**
  - Negligible antibody content

Exceptions to the General Rule

- **Antibody-vaccine spacing recommendations apply specifically to MMR and varicella-containing vaccines**
- **Does NOT apply to:**
  - Zoster vaccine (large amount of virus in the vaccine)
  - Yellow fever, oral typhoid (negligible antibody in the U.S. blood supply)
  - LAIV (viruses change annually)
  - Rotavirus (replication in GI tract)

Interval Between Doses of Different Vaccines

- Simultaneous administration
- Non-simultaneous administration

Simultaneous Administration

General Rule

- **All vaccines can be administered at the same visit as all other vaccines**
- **Exceptions:**
  - PCV13 and PPSV23: Give PCV13 first
  - MCV4-D (Menactra only) and PCV13 in asplenic children: Give PCV13 first

Non-simultaneous Administration: Live-vaccine Effectiveness

Combination	Minimum Interval
2 live injected or live intranasal influenza vaccine	4 weeks
All other	None

Spacing of Live Vaccines Not Given Simultaneously

- If 2 live parenteral or intranasal vaccines are given less than 28 days apart, the vaccine given 2nd should be repeated
- Immune response from 1st vaccine interferes with replication of 2nd vaccine
- One exception: yellow fever vaccine and single-antigen measles vaccine

Interval Between Doses of the Same Vaccine

Intervals Between Doses

General Rule

- **Increasing** the interval between doses of a multidose vaccine does not diminish the effectiveness of the vaccine

Extended Interval Between Doses

- Not all permutations of all schedules for all vaccines have been studied
- Available studies of extended intervals have shown no significant difference in final titer
- It is not necessary to restart the series or add doses because of an extended interval between doses

Intervals Between Doses

General Rule

- Increasing the interval between doses of a multidose vaccine does not diminish the effectiveness of the vaccine

- Decreasing the interval between doses of a multidose vaccine may interfere with antibody response and protection

Recommended and Minimum Ages and Intervals Between Doses of Routinely Recommended Vaccines[1,2,3,4]

Vaccine and dose number	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
Diphtheria-tetanus-acellular pertussis (DTaP)-1[5]	2 months	6 weeks	8 weeks	4 weeks
DTaP-2	4 months	10 weeks	8 weeks	4 weeks
DTaP-3	6 months	14 weeks	6-12 months	6 months[6]
DTaP-4	15-18 months	15 months[7]	3 years	6 months
DTaP-5	4-6 years	4 years	—	—
Haemophilus influenzae type b (Hib)-1[5,8]	2 months	6 weeks	8 weeks	4 weeks
Hib-2	4 months	10 weeks	8 weeks	4 weeks
Hib-3[9]	6 months	14 weeks	6-9 months	8 weeks
Hib-4	12-15 months	12 months	—	—
Hepatitis A (HepA)-1	12-23 months	12 months	6-18 months	6 months
HepA-2	≥18 months	18 months	—	—
Hepatitis B (HepB)-1[5]	Birth	Birth	4 weeks-4 months	4 weeks
HepB-2	1-2 months	4 weeks	8 weeks-17 months	8 weeks
HepB-3[10]	6-18 months	24 weeks	—	—
Herpes zoster (HZV)[11]	≥60 years	60 years	—	—
Human papillomavirus (HPV)-1[12]	11-12 years	9 years	8 weeks	4 weeks
HPV-2	11-12 years (+ 2 months)	9 years (+ 4 weeks)	4 months	12 weeks[13]
HPV-3[13]	11-12 years (+ 6 months)	9 years (+24 weeks)	—	—
Influenza, inactivated (IIV)[14]	≥6 months	6 months[15]	4 weeks	4 weeks
Influenza, live attenuated (LAIV)[14]	2-49 years	2 years	4 weeks	4 weeks
Measles-mumps-rubella (MMR)-1[16]	12-15 months	12 months	3-5 years	4 weeks
MMR-2[16]	4-6 years	13 months	—	—
Meningococcal conjugate (MCV)-1[17]	11-12 years	6 weeks[18]	4-5 years	8 weeks
MCV-2	16 years	11 years (+ 8 weeks)	—	—
Meningococcal polysaccharide (MPSV4)-1[17]	—	2 years	5 years	5 years
MPSV4-2	—	7 years	—	—
Pneumococcal conjugate (PCV)-1[8]	2 months	6 weeks	8 weeks	4 weeks
PCV-2	4 months	10 weeks	8 weeks	4 weeks
PCV-3	6 months	14 weeks	6 months	8 weeks
PCV-4	12-15 months	12 months	—	—
Pneumococcal polysaccharide (PPSV)-1	—	2 years	5 years	5 years
PPSV-2[19]	—	7 years	—	—
Poliovirus, Inactivated (IPV)-1[5]	2 months	6 weeks	8 weeks	4 weeks
IPV-2	4 months	10 weeks	8 weeks-14 months	4 weeks
IPV-3	6-18 months	14 weeks	3-5 years	6 months
IPV-4[20]	4-6 years	4 years	—	—
Rotavirus (RV)-1[21]	2 months	6 weeks	8 weeks	4 weeks
RV-2	4 months	10 weeks	8 weeks	4 weeks
RV-3[22]	6 months	14 weeks	—	—
Tetanus-diphtheria (Td)	11-12 years	7 years	10 years	5 years
Tetanus-diphtheria-acellular pertussis (Tdap)[23]	≥11 years	7 years	—	—
Varicella (Var)-1[16]	12-15 months	12 months	3-5 years	12 weeks[24]
Var-2[18]	4-6 years	15 months[25]	—	—

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Appendix A

Recommended and Minimum Ages and Intervals Between Doses of Routinely Recommended Vaccines[1,2,3,4]				
Vaccine and dose number	**Recommended age for this dose**	**Minimum age for this dose**	**Recommended interval to next dose**	**Minimum interval to next dose**
Diphtheria-tetanus-acellular pertussis (DTaP)-1[5]	2 months	6 weeks	8 weeks	4 weeks
DTaP-2	4 months	10 weeks	8 weeks	4 weeks
DTaP-3	6 months	14 weeks	6-12 months	6 months[6]
DTaP-4	15-18 months	15 months[7]	3 years	6 months
DTaP-5	4-6 years	4 years	—	—
Haemophilus influenzae type b (Hib)-1[6,8]	2 months	6 weeks	8 weeks	4 weeks
Hib-2	4 months	10 weeks	8 weeks	4 weeks
Hib-3[9]	6 months	14 weeks	6-9 months	8 weeks
Hib-4	12-15 months	12 months	—	—
Hepatitis A (HepA)-1	12-23 months	12 months	6-18 months	6 months

Minimum Intervals and Ages

- Vaccine doses should not be administered at intervals less than the minimum intervals or earlier than the minimum age

When Can Minimum Intervals Be Used?

- Catch-up for a lapsed vaccination schedule
- Impending international travel
- NOT to be used routinely

The "Grace Period"

- ACIP recommends that vaccine doses given up to four days before the minimum interval or age be counted as valid
- Should not be used for scheduling future vaccination visits
- Use for reviewing vaccination records

MMWR 2011;60(RR-2)

Use of the "Grace Period"

- To schedule a future appointment — **NO!**
- When evaluating a vaccination record — **Yes**
- Patient is in the office or clinic early — **Maybe**

Use of the "Grace Period"

- **Patient is in the office or clinic**
  - Patient/parent is known and dependable — Reschedule
  - Patient/parent is unknown or undependable — Vaccinate

Violations of Minimum Intervals and Minimum Ages

- Grace period may conflict with some state school entry requirements
- Immunization programs and/or school entry requirements may not accept some or all doses given earlier than the minimum age or interval, particularly varicella and/or MMR vaccines
- Providers should comply with local and/or state immunization requirements

Violations of Minimum Intervals and Minimum Ages

- **Minimum interval/age has been violated**
  - Dose invalid
- **The repeat dose should be administered at least a minimum interval from the invalid dose**

The "Pediarix Challenge"

- **Off-schedule administration could lead to 2 potential invalid doses:**
  - Hepatitis B birth dose (HepB1)
  - Pediarix at 2 months (HepB2)
  - Pediarix at 5 months (invalid HepB-age younger than 24 weeks)
  - Pediarix at 6 months (invalid HepB-interval since last dose less than 8 weeks)
- **CDC does NOT recommend a 5th dose of Hepatitis B vaccine in this situation**

Contraindications and Precautions

Vaccine Adverse Reaction

- **Adverse reaction**
  - Extraneous effect caused by vaccine
  - “Side effect"

Vaccine Adverse Reaction

- **Adverse reaction**
- **Adverse <u>event</u>**
  - Any medical event following vaccination
  - May be true adverse reaction
  - May be only coincidental

Vaccine Adverse Event Reporting System (VAERS)

- Reports from public and private sectors
- Providers should report any clinically significant adverse event that occurs after a vaccine, even if unsure whether or not the vaccine caused the event
- Providers may also report vaccine administration errors
- 1-800-822-7967 or online at www.vaers.hhs.gov

Vaccine Adverse Event Reporting System (VAERS)

- Jointly administered by CDC and FDA
- National reporting system
- Passive - depends on healthcare providers and others to report
- Receives ~30,000 reports per year

http://vaers.hhs.gov/

Types of Vaccine Adverse Reactions

- Local
- Systemic
- Allergic (least frequent)

Vaccine Adverse Reactions

- **Local**
  - Pain, swelling, redness at site of injection
  - Common with inactivated vaccines
  - Usually mild and self-limited

Vaccine Adverse Reactions

- **Local**
- **Systemic**
  - Fever, malaise, headache
  - Nonspecific
  - May be unrelated to vaccine

Live, Attenuated Vaccines

- Must replicate to produce immunity
- Symptoms usually mild
- Occur after an incubation period (usually 3-21 days)

Vaccine Adverse Reactions

- **Local**
- **Systemic**
- **Allergic**
  - Due to vaccine or vaccine component
  - Rare
  - Risk minimized by screening

Contraindication

- A condition in a recipient which greatly increases the chance of a serious adverse event

Precaution

- A condition in a recipient which may increase the chance or severity of an adverse event

OR

- May compromise the ability of the vaccine to produce immunity

Contraindications and Precautions

Permanent contraindications

- Severe allergic reaction to a prior dose of vaccine or to a vaccine component

Contraindications and Precautions

Permanent contraindications

- **Rotavirus vaccines only**
  - Severe Combined Immunodeficiency disease (SCID)
  - History of intussusception
- **Pertussis vaccines only**
  - Encephalopathy not due to another identifiable cause occurring within 7 days of pertussis vaccination

Contraindications and Precautions

Condition	Live	Inactivated
Allergy to component	C	C
Encephalopathy	---	C
Pregnancy	C	V*
Immunosuppression	C	V
Moderate/severe illness	P	P
Recent blood product	P**	V

C=contraindication
P=precaution
V=vaccinate if indicated
*Except HPV
**MMR and varicella-containing (except zoster vaccine and LAIV)

Appendix A

Guide to Contraindications and Precautions to Commonly Used Vaccines[1,*,†] (page 1 of 2)

Vaccine	Contraindications	Precautions
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Infant weighing less than 2000 grams (4 lbs, 6.4 oz)[2]
Rotavirus (RV5 [RotaTeq], RV1 [Rotarix])	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Severe combined immunodeficiency (SCID) • History of intussusception	• Moderate or severe acute illness with or without fever • Altered immunocompetence other than SCID • Chronic gastrointestinal disease[3] • Spina bifida or bladder exstrophy[3]
Diphtheria, tetanus, pertussis (DTaP) **Tetanus, diphtheria, pertussis (Tdap)** **Tetanus, diphtheria (DT, Td)**	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • For pertussis-containing vaccines: encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of a previous dose of DTP or DTaP (for DTaP); or of previous dose of DTP, DTaP, or Tdap (for Tdap)	• Moderate or severe acute illness with or without fever • Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus toxoid-containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of tetanus or diphtheria toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid containing vaccine • For pertussis-containing vaccines: progressive or unstable neurologic disorder (including infantile spasms for DTaP), uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized **For DTaP only:** • Temperature of 105° F or higher (40.5° C or higher) within 48 hours after vaccination with a previous dose of DTP/DTaP • Collapse or shock-like state (i.e., hypotonic hyporesponsive episode) within 48 hours after receiving a previous dose of DTP/DTaP • Seizure within 3 days after receiving a previous dose of DTP/DTaP • Persistent, inconsolable crying lasting 3 or more hours within 48 hours after receiving a previous dose of DTP/DTaP
***Haemophilus influenzae* type b (Hib)**	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Age younger than 6 weeks	• Moderate or severe acute illness with or without fever
Inactivated poliovirus vaccine (IPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Pregnancy
Pneumococcal (PCV13 or PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component (including, for PCV13, to any diphtheria toxoid-containing vaccine)	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR)[4]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy[5] or patients with human immunodeficiency virus [HIV] infection who are severely immunocompromised)[6] • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[7] • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing[8]
Varicella (Var)[4]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy[5] or patients with HIV infection who are severely immunocompromised)[6] • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[7] • Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination; avoid use of these antiviral drugs for 14 days after vaccination.
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever

(continued on page 2)

Technical content reviewed by the Centers for Disease Control and Prevention

IMMUNIZATION ACTION COALITION Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

www.immunize.org/catg.d/p3072a.pdf • Item #P3072a (3/15)

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Vaccination During Pregnancy

- Live vaccines should not be administered to women known to be pregnant
- In general, inactivated vaccines may be administered to pregnant women for whom they are indicated
- HPV vaccine should be deferred during pregnancy

Vaccination During Pregnancy

- **Inactivated vaccines**
  - Routine
    - Influenza – any trimester
    - Tdap – 27 to 36 weeks
  - Vaccinate if indicated (HepA, HepB)
  - Vaccinate if increased risk (all others except HPV)
  - Provider discretion (PCV13, Hib, MenB)

Vaccination of Immunosuppressed Persons

- Live vaccines should not be administered to severely immunosuppressed persons
- Persons with isolated B-cell deficiency may receive varicella or zoster vaccine
- Inactivated vaccines are safe to use in immunosuppressed persons, but the response to the vaccine may be decreased

Defining Immunosuppression

- Disease
  - Primary Immunodeficiency Diseases
    - Isolated B-cell deficiency
    - Combined lymphocyte deficiency (B and T cell)
    - Complement deficiency
    - Phagocyte deficiency
  - HIV infection / AIDS
  - Blood cancer
    - Leukemia
    - Lymphoma
    - Multiple myeloma
  - Generalized malignancy (metastatic) cancer

Defining Altered Immunocompetence (ACIP)

- Medication induced
  - "Traditional" anticancer therapies
  - Iso-antibody therapy
  - Immune mediator therapy
  - Corticosteroids
  - Specific therapy for solid organ transplant antitumor rejection
  - Specific therapy for hematopoietic cell transplant

Corticosteroids and Immunosuppression

- **The amount or duration of corticosteroid therapy needed to increase adverse event risk is not well-defined**

- **Dose generally believed to be a concern:**
  - 20 mg or more/day of prednisone for 2 weeks or longer
  - 2 mg/kg per day or more of prednisone for 2 weeks or longer

Corticosteroids and Immunosuppression(2)

- Does NOT apply to aerosols, topical, alternate-day, short courses (less than 2 weeks), physiologic replacement schedules
- Delay live vaccines for at least 1-3 month after discontinuation of high-dose therapy

Vaccination of Immunocompromised Persons

Safety:

- Immunocompromised persons are at increased risk of adverse events following live vaccines
- Live vaccines may be administered at least 3 months following termination of chemotherapy (at least 1 month after high-dose steroid use of 2 weeks or more)
- LAIV, MMR, varicella, and rotavirus vaccines may be administered to susceptible household and other close contacts

Vaccination of Immunocompromised Persons

- **Safety and efficacy**
- **Anti-tumor necrosis factor inhibitors**
  - Generally can treat like steroids
  - Some experts recommend waiting longer than one month after vaccination with live or inactivated vaccines
- **Other isoantibodies (e.g. lymphocyte depleting agents)**
  - Some experts recommend up to six months

Defining Immunosuppression

"The degree of altered immunocompetence in a patient should be determined by a physician."

Vaccination of Hematopoietic Cell Transplant (HCT) Recipients

- Antibody titers to VPDs decline during the 1-4 years after allogeneic or autologous HCT if the recipient is not revaccinated
- HCT recipients are at increased risk of some VPDs, particularly due to encapsulated bacteria
- Revaccination recommended beginning 6-24 months post-transplant

MMWR 2000;49(RR-10)

Vaccination of HCT Recipients

- Inactivated influenza vaccine at least 4-6 months following transplant and annually thereafter

- Inactivated vaccines (DTaP, Td, IPV, PCV13, PPSV23, Hepatitis B, Hib, HPV, MCV4) at 6 months

- MMR, varicella, yellow fever vaccines at 24 months if immunocompetent

Rubin, LG, Levin MJ, Ljungman P., et. Al. 2013 IDSA Clinical Practice Guidelines for Vaccination of the Immunocompromised Host. Clin. Infect. Dis. 2014; 58: e-44-100.

Preventing and Managing Adverse Reactions

Patient name: ____________________ Date of birth: ___/___/___ (mo.) (day) (yr.)

Screening Questionnaire for Child and Teen Immunization

For parents/guardians: The following questions will help us determine w… be given today. If you answer "yes" to any question, it does not necessarily r… be vaccinated. It just means additional questions must be asked. If a question… healthcare provider to explain it.

1. Is the child sick today?
2. Does the child have allergies to medications, food, a vaccine component, or l…
3. Has the child had a serious reaction to a vaccine in the past?
4. Has the child had a health problem with lung, heart, kidney or metabolic dise… (e.g., diabetes), asthma, or a blood disorder? Is he/she on long-term aspirin th…
5. If the child to be vaccinated is between the ages of 2 and 4 years, has a health… provider told you that the child had wheezing or asthma in the past 12 month…
6. Has the child, a sibling, or a parent had a seizure; has the child had brain or ot… nervous system problems?
7. Does the child have cancer, leukemia, AIDS, or any other immune system pr…
8. In the past 3 months, has the child taken cortisone, prednisone, other steroid… or anticancer drugs, or had radiation treatments?
9. In the past year, has the child received a transfusion of blood or blood produc… or been given immune (gamma) globulin or an antiviral drug?
10. Is the child/teen pregnant or is there a chance she could become pregnant du… the next month?
11. Has the child received vaccinations in the past 4 weeks?

Form completed by: ____________________

Form reviewed by: ____________________

Did you bring your child's immunization record card with you?

It is important to have a personal record of your child's vaccinations. If you don't hav… healthcare provider to give you one with all your child's vaccinations on it. Keep this rec… you every time you seek medical care for your child. Your child will need this important… life to enter day care or school, for employment, or for international travel.

Information for Health Professionals about the Screening Questionnaire for Child & Teen Immunization

Are you interested in knowing why we included a certain question on the Screening Questionnaire? If so, read the information below. If you want to find out even more, consult the references listed at the bottom of this page.

1. Is the child sick today? [all vaccines]

There is no evidence that acute illness reduces vaccine efficacy or increases vaccine adverse events (1, 2). However, as a precaution with moderate or severe acute illness, all vaccines should be delayed until the illness has improved. Mild illnesses (such as otitis media, upper respiratory infections, and diarrhea) are NOT contraindications to vaccination. Do not withhold vaccination if a person is taking antibiotics.

2. Does the child have allergies to medications, food, a vaccine component, or latex? [all vaccines]

History of anaphylactic reaction such as hives (urticaria), wheezing or difficulty breathing, or circulatory collapse or shock (not fainting) to a vaccine component or latex is a contraindication to some vaccines. For example, if a person experiences anaphylaxis after eating eggs, do not administer influenza vaccine, or if a person has anaphylaxis after eating gelatin, do not administer measles-mumps-rubella (MMR), MMR+varicella (MMRV), or varicella (VAR) vaccine. A local reaction is not a contraindication. For a table of vaccines supplied in vials or syringes that contain latex, go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/latex-table.pdf. For an extensive table of vaccine components, see reference 3.

3. Has the child had a serious reaction to a vaccine in the past?

[all vaccines] History of anaphylactic reaction (see question 2) to a previous dose of vaccine or vaccine component is a contraindication for subsequent doses (1). History of encephalopathy within 7 days following DTP/DTaP is a contraindication for further doses of pertussis-containing vaccine. Precautions to DTaP (not Tdap) include the following: (a) seizure within 3 days of a dose, (b) pale or limp episode or collapse within 48 hours of a dose, (c) continuous crying for 3 or more hours within 48 hours of a dose, and (d) fever of 105°F (40°C) within 48 hours of a previous dose. There are other adverse events that might have occurred following vaccination that constitute contraindications or precautions to future doses. Under normal circumstances, vaccines are deferred when a precaution is present. However, situations may arise when the benefit outweighs the risk (e.g., during a community pertussis outbreak).

4. Has the child had a health problem with lung, heart, kidney, or metabolic disease (e.g., diabetes), asthma, or a blood disorder? Is he/she on long-term aspirin therapy? [LAIV]

Children with any of the health conditions listed above should not be given the intranasal, live attenuated influenza vaccine (LAIV). These children should be vaccinated with the injectable influenza vaccine.

5. If the child to be vaccinated is between the ages of 2 and 4 years, has a healthcare provider told you that the child had wheezing or asthma in the past 12 months? [LAIV]

Children who have had a wheezing episode within the past 12 months should not be given the live attenuated influenza vaccine. Instead, these children should be given the inactivated influenza vaccine.

6. Has the child, a sibling, or a parent had a seizure; has the child had brain or other nervous system problem? [DTaP, Td, Tdap, TIV, LAIV, MMRV]

DTaP and Tdap are contraindicated in children who have a history of encephalopathy within 7 days following DTP/DTaP. An unstable progressive neurologic problem is a precaution to the use of DTaP and Tdap, and a progressive neurologic disorder in a teen is a precaution to the use of Td. For children with stable neurologic disorders (including seizures) unrelated to vaccination, or for children with a family history of seizures, vaccinate as usual (exception: children with a personal or family [i.e., parent or sibling] history of seizures generally should not be vaccinated with MMRV; they should receive separate MMR and VAR vaccines). A history of Guillain-Barré syndrome (GBS) is a consideration with the following: 1) Td/Tdap: if GBS has occurred within 6 weeks of a tetanus-containing vaccine and decision is made to continue vaccination, give age-appropriate Tdap instead of Td if no history of prior Tdap; 2) Influenza vaccine (TIV or LAIV): if GBS has occurred within 6 weeks of a prior influenza vaccination, vaccinate with TIV if at high risk for severe influenza complications.

7. Does the child have cancer, leukemia, AIDS, or any other immune system problem? [LAIV, MMR, MMRV, RV, VAR]

Live virus vaccines (e.g., MMR, MMRV, varicella, rotavirus, and the intranasal live, attenuated influenza vaccine [LAIV]) are usually contraindicated in immunocompromised children. However, there are exceptions. For example, MMR is recommended for asymptomatic HIV-infected children who do not have evidence of severe immunosuppression. Likewise, varicella vaccine should be considered for HIV-infected children with age-specific CD4+ T-lymphocyte percentage at 15% or greater and may be considered for children age 8 years and older with CD4+ T-lymphocyte counts of greater than or equal to 200 cells/µL. Immunosuppressed children should not receive LAIV. Infants who have been diagnosed with severe combined immunodeficiency (SCID) should not be given a live virus vaccine, including rotavirus (RV) vaccine. For details, consult the ACIP recommendations (4, 5, 6).

8. In the past 3 months, has the child taken cortisone, prednisone, other steroids, or anticancer drugs, or had radiation treatments? [LAIV, MMR, MMRV, VAR]

Live virus vaccines (e.g., MMR, MMRV, varicella, LAIV) should be postponed until after chemotherapy or long-term high-dose steroid therapy has ended. For details and length of time to postpone, consult the ACIP statement (1). To find specific vaccination schedules for stem cell transplant (bone marrow transplant) patients, see reference 7. LAIV can be given only to healthy non-pregnant individuals age 2–49 years.

9. In the past year, has the child received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug? [LAIV, MMR, MMRV, VAR]

Certain live virus vaccines (e.g., LAIV, MMR, MMRV, varicella) may need to be deferred, depending on several variables. Consult the most current ACIP recommendations or the current Red Book for the most current information on intervals between antiviral drugs, immune globulin or blood product administration and live virus vaccines (1, 2).

10. Is the child/teen pregnant or is there a chance she could become pregnant during the next month? [LAIV, MMR, MMRV, VAR]

Live virus vaccines (e.g., MMR, MMRV, varicella, LAIV) are contraindicated one month before and during pregnancy because of the theoretical risk of virus transmission to the fetus (1, 6). Sexually active young women who receive a live virus vaccine should be instructed to practice careful contraception for one month following receipt of the vaccine (5, 8). On theoretical grounds, inactivated poliovirus vaccine should not be given during pregnancy; however, it may be given if risk of disease is imminent (e.g., travel to endemic areas) and immediate protection is needed. Use of Td or Tdap is not contraindicated in pregnancy. At the provider's discretion, either vaccine may be administered during the 2nd or 3rd trimester (9).

11. Has the child received vaccinations in the past 4 weeks? [LAIV, MMR, MMRV, VAR, yellow fever]

If the child was given either live, attenuated influenza vaccine (LAIV) or an injectable live virus vaccine (e.g., MMR, MMRV, varicella, yellow fever) in the past 4 weeks, they should wait 28 days before receiving another vaccination of this type. Inactivated vaccines may be given at the same time or at any spacing interval.

References

1. CDC. General recommendations on immunization [illegible]
2. AAP. Red Book: Report of the Committee on Infectious Diseases [illegible]
3. Table of Vaccine Components [illegible]
4. CDC. Measles, mumps, and rubella [illegible] MMWR 1998; 47 (RR-8).
5. CDC. Prevention of varicella: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2007; 56 (RR-4).
6. CDC. Prevention and Control of Influenza [illegible]
7. CDC. [illegible] MMWR 2000; 49 (RR-10) [illegible]
8. CDC. Notice to readers: Revised ACIP recommendation for avoiding pregnancy after receiving a rubella-containing vaccine. MMWR 2001; 50 (49).
9. CDC. Prevention of pertussis, tetanus, and diphtheria among pregnant and postpartum women and their infants: Recommendations of the ACIP. MMWR 2008; 57 (RR-4).

Benefit and Risk Communication

- **Opportunities for questions should be provided before each vaccination**

- **Vaccine Information Statements (VISs)**
  - Must be provided before each dose of vaccine
  - Public and private providers
  - Available in multiple languages

Your Source for VISs
www.immunize.org


People
OCTOBER 1, 2007
JENNY McCARTHY
Fighting for My Autistic Son
In an emotional memoir the star describes Evan's devastating diagnosis, his surprising breakthrough–and how Jim Carrey helped her heal
McCarthy with son Evan Asher, age 5
THE McCANNS WHAT'S NEXT
EMMY GLAMOUR!
• All the Dresses
• All the Drama
O.J. SIMPSON JAIL TIME?


ALL THE BEST FOR YOUR FAMILY
Cookie
ARE YOU READY FOR ANOTHER KID?
TAKE OUR QUIZ AT COOKIEMAG.COM
KIDS' ROOMS
21
DECORATING IDEAS ON A BUDGET
P. 34, P. 78
AMANDA PEET
speaks out for vaccinations
P. 110
The All-American Family Vacation
P. 100
MOM TECH
The only GPS systems, digital cameras & camcorders you need
P. 40, P. 84
GET READY FOR DATE NIGHT
P. 52
7
simple summer recipes
P. 36, P. 68
The truth on taming the tantrum
P. 58
CELEBRITY BABY BLOG


WHOOPING COUGH
Jennifer Lopez


Campbell Brown
ART STREIBER/CNN

Communicating with Parents

- **For providers:**
  - If provider recommends it, parents more likely to follow
  - Ask, acknowledge, and advise
  - Start at prenatal visit, develop trust
  - Offer reliable resources
  - Know the science
  - Do not get defensive

Communicating with Parents

- **What parents want:**
  - Delayed vs. alternate schedules
  - Facts and statistics
  - Trust good websites
  - Do not want to be talked down to
  - Unbiased, non-coercive, credible, non-judgmental information

Childhood Immunization Schedule and Safety

- **Institute of Medicine - Mission**
  - Review scientific findings and stakeholder concerns related to the safety of the recommended childhood immunization schedule
  - Identify potential research approaches, methodologies, and study designs that could inform this question
  - Issue a summary report
- **Findings**
  - IOM committee finds no evidence that the schedule is unsafe
  - Following the complete childhood immunization schedule is strongly associated with reducing vaccine-preventable diseases
  - Committee calls for continued study of the immunization schedule using existing data systems

www.iom.edu/childimmunizationschedule

Syncope

Vasovagal reaction

Can occur after vaccination or any other anxiety provoking activity

Syncope

- Since 2001, 666 reports of syncope reported to VAERS
- 80% of reports occur in the first 15 minutes of vaccination
- Increasing reports since 2005, coincident with vaccines recommended for adolescents

Syncope and Head Injury

- Concerning public health issue is head injury following syncope
- 76% of VAERS reports of head injury following syncope occur in adolescents

Syncope and CDCs General Recommendations

- Adolescents and adults should be seated during vaccination
- Consider a 15 minute waiting period following vaccination of adolescents

CDC Vaccines and Immunization Resources

- **Questions? E-mail CDC**
  - nipinfo@cdc.gov or www.cdc.gov/cdcinfo

- **Website** www.cdc.gov/vaccines
- **HCP** www.cdc.gov/vaccines/hcp
- **General Recommendations**

http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm

- **Vaccines, 6th edition, eds. Plotkin, Orenstein, Offit**